REMARKS

In the Office Action mailed February 14, 2003, Claims 5-10 have been objected to as allegedly in improper form because a multiple dependent claim cannot depend upon another multiple dependent claim. Claims 4-6 and 8-10 were amended to remove multiple dependencies by the Preliminary Amendment filed July 20, 2001 in this application. Withdrawal of the objection to Claims 5-10 is respectfully requested.

Claims 11-14 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite and under 35 U.S.C. § 101 as improper process claims. The rejected claims allegedly fail to set forth any positive steps. Claim 11 was cancelled without prejudice in the Preliminary Amendment filed July 20, 2001. Claims 12-14 are cancelled without prejudice herein. Withdrawal of the rejection of Claims 11-14 is respectfully requested.

Claims 1-4 have been rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite. The Examiner has alleged that Claim 1 lacks a final process step that clearly relates back to the preamble, and that it is not clear from Claim 1 if incorporation of nucleotide precedes detection.

Claim 1 has been amended to relate the detection step back to the preamble. Further, since Claim 1 recites "and said incorporation is detected," Applicant submits that it is clear from the language of Claim 1 that incorporation of nucleotide occurs before detection. Withdrawal of the rejection of Claims 1-4 under 35 U.S.C. § 112, second paragraph, is respectfully requested.

Claims 1-4 have been rejected under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent No. 5,547,843 to Studier et al. ("Studier et al."). The Examiner has alleged that Studier et al. disclose the method of Claims 1-4.

Studier et al. disclose a method for promoting "specific alignment of primers on a template" by incubating a template molecule with single-stranded DNA-binding protein (SSB) prior to an enzymatic sequencing reaction. The disclosure of Studier et al. is directed to improving primer binding, and thus the SSB is added with the primer in the primer annealing step, as disclosed at Col. 1, l. 44-62, Col. 2, l. 36-40 and Col. 3, l. 26-32 of Studier et al.

Specifically, the template molecule, SSB and primers are incubated before addition of polymerase, consistent with the teaching of Studier et al. to use SSB to promote alignment of primers on the template. In the presently claimed invention, SSB is included in a polymerase reaction to improve the efficiency of the method of identifying a base at a target position. Thus in contrast to the prior art methods, in the present invention SSB is added after hybridization of the primer to the template, as disclosed in the specification, for example at page 15, lines 1-4 and Claim 9. Claim 1 has been amended to clarify the subject matter of the invention, and Claim 9 has been cancelled without prejudice.

In view of the foregoing comments and amendments, withdrawal of the rejection of Claims 1-4 under 35 U.S.C. § 102(b) is respectfully requested.

Claims 12-14 have been rejected under 35 U.S.C. § 103(a) as allegedly rendered obvious by International Patent Application No. WO93/23564 to Uhlen et al. ("Uhlen et al.") in view of Chou (1992) Nucleic Acids Research 20:4371 ("Chou"). The Examiner has alleged that Uhlen et al. teach a method of enhancing the activity of nucleotide degrading enzyme and luciferase and maintaining a constant signal intensity, and that Chou teaches a method of sequencing-by-synthesis including SSB. The Examiner has alleged that it would have been obvious to combine the methods of Uhlen et al. and Chou in view of the statement of Chou that SSB improves Taq polymerase activity, or melts PCR secondary structure to allow Taq polymerase to read through.

Claims 12-14 have been previously cancelled without prejudice. However, Applicant respectfully submits that Claims 12-14 are not rendered obvious by the cited prior art, because Uhlen et al. do not teach a method of enhancing the activity of a nucleotide degrading enzyme, nor does Chou teach a sequencing-by-synthesis method. Withdrawal of the rejection of Claims 12-14 under 35 U.S.C. § 103(a) is respectfully requested.

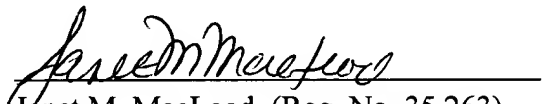
Claim 15 has been rejected under 35 U.S.C. § 103(a) as allegedly rendered obvious by Studier et al. in view of the Stratagene Catalog (1988) p. 39. The Examiner has alleged that it would have been obvious to combine the reagents of the method of Studier et al. into a kit, as motivated by the Stratagene Catalog.

Applicant respectfully submits that Studier et al. do not teach a method of sequencing-by-synthesis. Rather, Studier et al. teach sequencing by primer walking using a plurality of oligonucleotides. One would not have been motivated to include nucleotides for incorporation in a kit to perform such a method, because the method of Studier utilizes contiguously annealing oligomers, not nucleotides. Accordingly, the combination of cited references fails to achieve the subject matter of Claim 15. Withdrawal of the rejection of Claim 15 under 35 U.S.C. § 103(a) is respectfully requested.

In view of the foregoing remarks and amendments, favorable reconsideration and allowance of all pending claims is earnestly solicited.

Respectfully submitted,

Date: June 5, 2003

By: 

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